07 August 2015

Mr. Kent W. Hawley
Chief, Environmental Section
9 CES/CEVR
6601 B Street
Beale Air Force Base, CA 95903-1708

TENTATIVE NOTICE OF APPLICABILITY, GENERAL ORDER NO. R5-2015-0012, SITE TU509, BEALE AIR FORCE BASE, YUBA COUNTY

The Air Force Civil Engineering Center (AFCEC) submitted a Notice of Intent dated 17 February 2015 requesting coverage under General Order No. R5-2008-0149, *General Waste Discharge Requirements for In-situ Groundwater Remediation at Sites with Volatile Organic Compounds, Nitrogen Compounds, Perchlorate, Pesticides, Semi-Volatile Compounds, Hexavalent Chromium, and/or Petroleum Compounds.* Based on information in your submittal, it is our determination that this project does meet the requirements of that general order, which were recently revised in February 2015. The applicable order is now General Order No. R5-2015-0012, General Waste Discharge Requirements for In Situ Groundwater Remediation and Discharge of Treated Groundwater to Land. All of the requirements contained in this general order are applicable to your project. You are assigned Order No. R5-2015-0012-___.

Project Location:

The project is located at 15301 Warren Shingle Road, Beale AFB, California.
Assessor's Parcel Number: Not applicable
Township 15N, Range 5E

Project Description:

Site TU509 is the Base medical clinic at the Beale Air Force Base (Site) in Yuba County, California (Figures 1 and 2). The clinic was constructed in the late 1950's. Three 8,000 gallon underground storage tanks (USTs) stored diesel fuel for the clinic's backup generators. One UST was removed in 1998, the other two in 2009. Investigations conducted at the site identified total petroleum hydrocarbons as diesel (TPH-D) and benzene in soil and groundwater.

A Corrective Action Plan (CAP) was developed for the Site (CH2M HILL, 2015). The CAP selected excavation as the remedy for vadose zone soil, and enhanced bioremediation as the remedy for groundwater. Approximately 717 tons of smear zone soil were excavated during January 2015. Three perforated pipes were installed in the

bottom of the excavation to allow oxygen release compound advanced (ORC-A®) to be injected. In addition, ORC-A® will be injected into the plume downgradient of the former USTs along two arrays of vertical borings aligned approximately perpendicular to groundwater flow.

The Discharger plans to inject a total of approximately 3,000 pounds of ORC-A® into the groundwater plume per injection event. Three or fewer injection events are anticipated. This work will be conducted in accordance with the Final CAP, which addressed Central Valley Water Board staff comments on the draft version.

The proposed injections could potentially increase total dissolved solids (TDS) concentrations and may create hexavalent chromium in the treatment area. Due to the location of the Site being miles from potential receptors, the possibility that these constituents will migrate to sensitive receptors is considered very low. However, if TDS or hexavalent chromium are more than 20% greater than their respective baseline concentrations, or if water quality objectives listed in Finding 18 of the General Order are exceeded in the designated compliance wells, then AFCEC will implement one or more of the contingency measures presented below in the Contingency Plan section.

These contingency measures range from resampling the compliance wells to adding extraction wells and treatment for the contaminants of concern created or mobilized by the injections. The threat posed by these contaminants of concern to potential receptors and groundwater quality will dictate which contingency measures are implemented.

As part of this Order, groundwater monitoring will be performed in accordance with the attached Monitoring and Reporting Program (MRP) to confirm injection of ORC-A® is not adversely impacting groundwater quality, and to monitor the progress of the remedy.

The tentative Notice of Applicability was issued for 30-day public review on ____August 2015. [Address any public comments received here].

General Information:

1. The project will be operated in accordance with the requirements contained in the General Order No. R5-2015-0012, and in accordance with the information submitted in the Notice of Intent and specified in this Notice of Applicability.

2. Injection of materials into the groundwater beneath Site TU509, other than ORC-A® and materials specified in the contingency plan, is prohibited.

3. Failure to abide by the conditions of the General Order could result in an enforcement action as authorized by provisions of the California Water Code.

4. US Air Force shall comply with the attached Monitoring and Reporting Program, Order No. R5-2015-0012-___, and any revisions thereto as ordered by the Executive Officer.

5. Comply with Contingency Plan as follows:

Contingency Plan:

The General Order requires a contingency plan for corrective actions should water quality exceed the requirements of the Order at the points of compliance. The General Order prohibits concentrations of TDS or Cr^{+6} more than 20% greater than their respective background levels, or exceedances of water quality limits at points of compliance.

Baseline concentrations of TDS and Cr^{+6} will be determined prior to the injections following the procedures specified in the Notice of Intent, Attachment B.

If there is an exceedance at a downgradient compliance well, a confirmation sample will be collected within 10 days of learning of the exceedance. If the exceedance is confirmed, the Water Board will be notified in writing within 10 days.

If an exceedance is confirmed in a downgradient compliance well, a corrective action work plan will be submitted to the Water Board for approval within 30 days. The Work Plan will include one or more of the following:

- Increase monitoring frequency;
- Expand the monitoring network;
- Inject reducing compound (such as sodium thiosulfate) or metals treatment compound (calcium polysulfide) to reduce concentrations of any ORC-A® or dissolved metals mobilized by aerobic bioremediation; or
- Induce hydraulic control of amendments in the target treatment area.

All contingency measures agreed to by Central Valley Water Board and the US Air Force will be fully implemented within 6 months of detecting one of these conditions.

If you have any questions regarding this matter, please call Walter Floyd at (916) 464-4651 or contact him at Walter.Floyd@waterboards.ca.gov.

PAMELA C. CREEDON
Executive Officer

Attachments